SPECIFICATION AMENDMENTS

Page 7, lines 8-11, replace the paragraph with the following amended paragraph:

The invention does not use overvoltage identification devices with subsequent disconnection of the in-phase transistor, rather it is based on the principle of limiting the current in the in-phase transistor using its ~~cut-off~~ pinch-off voltage.

Page 9, line 20 through page 10, line 20, replace the paragraph with the following amended paragraph:

a) in the event of a short circuit to ground potential GND (Vin = 0V), the voltage at the input E is also 0V and the protective circuit Ss operates normally.
b) in the event of a short circuit to 14V (Vbat1) active at the device connection A, the source voltage Vs of the transistor T1 increases to a value Vs = Vbat1 – Vth, in other words to a value Vs < Vbat1. The transistor T1 is now in the ~~cut-off range~~ pinch-off region. The current through the diode D3 is limited by the protective resistor R2 to a predefined permitted value.
c) in the event of negative transient voltages (for example ISO test pulses) active at the device connection A, the transistor T1 becomes

conductive, with its gate source voltage Vgs now being limited by the Zener diode D1. The gate resistor Rv limits the current flow through the Zener diode D1 to a tolerable value. The protective resistor R2 limits the current flow through the diode D4 of the protective structure of the microcontroller µC.

d) in the event of a short circuit to the 42V on-board electrical system active at the device connection A, the input voltage Vin increases drastically – up to maximum 60V. The source voltage Vs of the transistor T1 will increase in the event of a short circuit to 14V to a value Vs = Vbat1 – Vth, i.e. a value Vs < Vbat1. As the transistor T1 is now in the ~~cut-off range~~ pinch-off region, the total voltage difference drops there to the input voltage Vin. The drain source voltage Vds of the transistor T1 becomes Vds = Vin – (Vbat – Vth). The power loss P(T1) resulting at the transistor T1 is thereby determined by the voltage difference Vds and the current I(R2) flowing through the protective resistor R2: P(T1) + Vds*I(R2). The peak value occurring with transient voltages of 60V is < 100mW, the effective value being around 60mW, which can be managed easily using a standard housing for the transistor T1.